

[19th October 1927]

## APPENDIX I.

[Vide answer to question No. 664 asked by Mr. Basheer Ahmed Sayeed at the meeting of the Legislative Council held on the 19th October 1927, page 192 supra.]

*Power driven wooden chekkus.*—In this Presidency oil is extracted by means of iron mills worked by power and by country wooden chekkus driven by bullocks. The former method is not generally in favour as the oil extracted in an iron mill, besides being slightly discoloured, is supposed to be unsuitable for edible purposes on account of its “sudu” or heating effect on the human system and does not therefore fetch a good price. Moreover, the profits of the oil milling industry in this Presidency are mostly made by sale of the cake, the oil having to be disposed of at very competitive prices which mean a very small margin of profit and the cake from iron mills which takes the form of powder and small lumps is in little demand as cattle food and has therefore to be sold as manure at a very comparatively low price.

Country wooden chekkus are almost universally used. The bullock power employed is expensive but the oil extracted is clear and in great demand and therefore commands a higher price. The cake comes out of the chekku in the form of semi-circular flakes and is sold entirely as cattle food at a better price than cake which is fit only for manurial purposes.

The chekku evolved by the Industrial Engineer is made entirely of wood as far as the crushing portion is concerned so that the seed does not come into contact with metal at all and a suitable arrangement is made to drive it by power. The outturn on actual test is 20½ lb. of gingelly seed per 55 minutes as against about 10 lb. of seed per hour of the bullock driven chekku which cannot possibly work for more than 10 hours a day. The average percentage of oil extracted in the power driven chekku is 42 per cent as against 38 to 39 per cent of the bullock driven chekkus. Orders for two machines of this description have already been received from private oil millers in Madras and are now under execution in the workshop. Several other parties interested in oil milling have evinced interest in the working of the machine.

II. *Experiments with a view to devising an improved method of drying warps on a wooden hand-sizing machine.*—A furnace burning country charcoal was designed for this purpose and manufactured in the workshop. This was fitted on to a wooden sizing machine and worked. The outturn was 75 yards of sized yarn as against 30 yards previously. With a view to further increase this outturn, the Industrial Engineer has altered the design and the final arrangement has been manufactured and fitted on to the machine which is now ready for test by the Textile section.

III. *Improved mechanism for working a drop box slay.*—This slay carries four shuttles and the mechanism evolved enables the weaver from his seat to use any shuttle desired by pressing a lever on the slay.

IV. *Groundnut decorticators—(Works in progress).*—Two definite stages have been reached in this experiment. It has been established by actual trial that breakage depends to a certain extent on the rate of feed. An arrangement to feed groundnuts at a uniform rate has been devised and made.

It has also been ascertained that the breakage is minimized if nuts of uniform size are fed into the decorticator. The Industrial Engineer has designed a machine to grade the nuts.